

# Current CDC Efforts to Prevent and Control Human Immunodeficiency Virus Infection and AIDS in the United States Through Information and Education

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## Synopsis .....

*The human immunodeficiency virus (HIV) is estimated to have infected more than a million people in the United States and millions more in other countries. Even though there is no vaccine or effective treatment, HIV infection can be prevented through behavioral change. As the lead Public Health Service Agency for disease prevention, the Centers for Disease Control (CDC) has designed and implemented information and education activities with the ultimate goal of preventing HIV infection and AIDS in the United States. The target populations include the general public, school- and college-aged populations, persons infected or at increased risk of infection, minorities, and health workers.*

*Because AIDS will be with us for a long time, CDC views educating the public as a long-term undertaking. The agency has initiated an intensive continuing national public information campaign, an informational brochure to be distributed to every U.S. household, a national AIDS information toll-free hotline, and a clearinghouse system that will maintain a comprehensive inventory of AIDS information resources and services. CDC also supports public information and education efforts by State and local health agencies.*

*To reach school- and college-age youth, CDC, in consultation with governmental and national private sector organizations, developed guidelines for effective school health education to assist school health personnel in determining the scope and content of AIDS education. CDC also works with State and local education agencies to help carry out and evaluate educational efforts to prevent the spread of HIV among school- and college-age youth.*

*The populations with the highest priority for AIDS information and education efforts are those who are at increased risk of acquiring or transmitting the AIDS virus because they use illicit intravenous drugs and share needles, engage in anal intercourse, have many sexual partners, practice prostitution, or engage in sex with those who practice these behaviors. Another high-priority population, because they can infect their offspring, is reproductive age women engaging in high-risk behavior and women infected with HIV who become pregnant. CDC programs targeted to these groups include community health education and risk reduction interventions, counseling and testing for HIV infection, AIDS community demonstration projects, perinatal AIDS prevention projects, and programs focused on preventing AIDS in minority populations.*

*CDC is developing a variety of educational approaches for health workers in clinical settings because they are an important channel for providing accurate AIDS information, helping to assess risk, and counseling to actively reduce risk for the patient, sex partners of the patient, friends, and family members of the patient. CDC has conducted research and provided information and training on the use of HIV laboratory tests. CDC has also developed numerous scientific and techni-*

cal guidelines and recommendations in consultation with practitioners, public health officials, and others and disseminated these through the *Morbidity and Mortality Weekly Report*. In addition, CDC has provided information about the risk of HIV transmission in the workplace and about methods of prevention.

*CDC will continue to evaluate these activities and support research in education and related interventions that may be necessary to prevent infection by the HIV virus. By providing educational support for behavior changes that decrease HIV transmission, we can contribute to AIDS prevention in the 1990s.*

**I**T IS ESTIMATED THAT the human immunodeficiency virus (HIV), the organism that causes acquired immunodeficiency syndrome (AIDS), has now infected more than a million people in the United States and millions more in other countries (1). Because there is neither a cure for AIDS nor a vaccine to prevent HIV infection, transmission of HIV must be interrupted. For information and education to be effective in helping to control the spread of HIV and AIDS, both must be designed to influence behaviors associated with transmission of HIV. Because of the urgency of the AIDS problem, we are implementing interventions while conducting research to assure and assess the effectiveness of our interventions (2). Some of the informational and educational activities currently being conducted in the effort to prevent HIV infection are described in this paper.

In 1986, the Centers for Disease Control (CDC) was designated the lead agency within the Public Health Service (PHS) to inform and educate the American public about AIDS. Based on the PHS' "Information Education Plan to Prevent and Control the Spread of AIDS in the United States" (3), the target populations are the following:

- the public (with special programs for racial and ethnic minority communities),
- school and college-aged populations,
- persons infected or at increased risk of infection, and
- health workers.

### **Educating the Public**

A prepared and receptive public provides the foundation upon which information and education programs operate (3). By the fall of 1987, most of the American public—through information delivered via television, radio, press, posters, leaflets, advertisements, and personal appearances—had at least heard about AIDS (4). Although the public was aware of AIDS, the knowledge was often

incomplete or incorrect. A sizeable percentage of the population surveyed during August and September 1987 by the National Center for Health Statistics believed that HIV infection is transmitted in households by casual contact or by donating blood. This finding is but one indication of the need for more information and education about AIDS. In addition, because AIDS will be with us as a health problem for a long time, educating the public must be viewed as a long-term undertaking. Several major CDC AIDS information and education activities aimed at reducing HIV transmission in the general population employ the print and electronic media.

An intensive, continuing national public information campaign, "America Responds to AIDS," began in July 1987 when CDC contracted with an international advertising agency to help develop this campaign. The initial campaign featured these actions:

- designation of October 1987 by President Reagan as "AIDS Awareness and Prevention Month,"
- distribution of public service announcements to television and radio networks and stations across the country,
- distribution of brochure and print ads promoting the theme "America Responds to AIDS" for use by national magazines,
- mobilization of public and private organizations in AIDS prevention efforts, and
- distribution of more than 8 million copies of a campaign brochure by December 1988 by a wide variety of organizations.

To respond to a congressional mandate, the Centers for Disease Control has developed a brochure to be distributed to every U.S. household by the end of June 1988. The brochure, entitled "Understanding AIDS," contains detailed information telling Americans how to protect themselves and their families against HIV infection and

AIDS. One hundred seven million copies will be printed in English for mailing throughout the United States and its Territories, excluding Puerto Rico.

Four million will be printed in Spanish, with 1,010,000 copies being distributed directly to households in Puerto Rico. The remaining copies in Spanish will be available from the National AIDS Clearinghouse, which will distribute them to persons in the United States who request the brochure through the National AIDS Information Line or by writing to the AIDS Clearinghouse.

The National AIDS Information Line, which was started in 1983 and is now operated under contract, provides easy access to information about AIDS. This toll-free hotline handled up to 2,000 calls per day during 1987. In September 1987, the hotline's capacity was quadrupled to meet the anticipated increased demand from the national campaign.

A contract was awarded in September 1987 to set up a National AIDS Clearinghouse System that will maintain a comprehensive inventory of AIDS resources and services including organizations, materials, and testing sites. The PHS will distribute materials through the clearinghouse to National AIDS Information Line users and to State and local AIDS prevention programs. Through the clearinghouse's electronic database, health care workers and others will have access to a wide range of information resources.

### **Educating the Young**

Schools and colleges provide an important setting for teaching young people about AIDS before they make choices about sexual activity or intravenous drug use. Parents, State and local school systems, and community agencies that serve youth have primary responsibility for educating the young.

CDC initiated a program in fiscal year 1987 to help school personnel carry out and evaluate educational efforts to prevent AIDS and the spread of HIV. This program also assists organizations that serve the needs of youth who do not attend school. The program adheres to the principles developed by the President's Domestic Policy Council (5).

In September 1987, cooperative agreements were signed with 15 national, private sector organizations with the capacity, experience, and constituencies to help schools and other organizations serving youth provide them with effective AIDS education.

Five of these cooperative agreements have been awarded to national organizations that address the specific educational needs and interests of black and Hispanic youth. Seven awards have been made to organizations that will increase the number of schools and agencies serving out-of-school youths that provide effective education about AIDS. Two awards were made to organizations that will help State departments of education provide effective education about AIDS, and one award was made to an organization representing college health services to help colleges and universities provide effective education about AIDS.

CDC entered into cooperative agreements with 15 State and 12 local education agencies that serve jurisdictions with the highest cumulative incidence of AIDS to provide intensive, locally determined education for school-aged populations. Each education agency will work with its corresponding health department, parent groups, and community leaders to employ educational strategies that are consistent with community values and needs.

Cooperative agreements were established with two State education agencies and one local education agency to conduct training and demonstration programs to help State and local education agency personnel from throughout the nation implement effective AIDS education in their own jurisdictions. Funds were provided in these awards for approximately 360 educational personnel to attend the training and demonstration programs.

"Guidelines for Effective School Health Education to Prevent the Spread of AIDS" were developed and published as a supplement to the CDC's Morbidity and Mortality Weekly Report on January 29, 1988 (5). The Guidelines were developed in consultation with a wide range of governmental and national private-sector organizations and are designed to assist school personnel and others in determining the scope and content of AIDS education.

The AIDS School Health Education Subfile, part of the Combined Health Information Database, is now operational. This annotated, computerized bibliography contains more than 100 abstracts of AIDS-related teaching guidelines and curriculums, policies, teaching materials, and programs. The subfile gives educators across the nation access to a wide variety of materials developed at the national, State, and local levels.

Technical assistance was provided to 12 cities and 12 States to help them develop a survey that could measure adolescents' knowledge, beliefs, and behaviors related to AIDS and HIV transmission.

*CDC's capabilities are being expanded to meet the increasing demand for training laboratory workers. A total of 114 courses is planned for fiscal year 1988.*

A contract was initiated with the National Academy of Sciences to review the methodologies suitable for evaluating the effectiveness of AIDS education programs.

### **Educating the Infected or Those at Increased Risk**

The population with the highest priority for receiving AIDS information and education efforts are those whose behaviors place them at increased risk of acquiring or transmitting the AIDS virus. These high-risk behaviors include anal intercourse, having multiple sexual partners, illicit IV drug use with sharing of needles and syringes, prostitution, and engaging in sex with those who practice these behaviors. Another high priority population is HIV infected women who become pregnant because they may infect their offspring. Persons infected with HIV must receive information about how to prevent their transmitting the virus to others. CDC supports a wide range of AIDS-related information and education activities aimed at persons who are infected or at increased risk of infection.

**Community health education and risk reduction (HERR).** Since 1986, CDC has funded 59 State and local health departments to enable them and their subcontractors to prevent the further spread of HIV infection by using a wide range of community interventions over an extended period. The following activities were funded:

- assessing community needs;
- assessing current levels of personnel, interested community organizations, and financial resources for AIDS prevention in communities;
- determining the baseline prevalence and trends of HIV infection among those who engage in high-risk behaviors and in the general population;
- determining baseline levels and trends of AIDS-related knowledge, attitudes, and behaviors among persons at risk of infection;
- determining baseline levels of knowledge and attitudes about AIDS and HIV infection in the

general population, including fears and beliefs about methods of transmission;

- coordinating the prevention efforts of minority and community-based organizations that carry out AIDS education;
- developing special initiatives targeted at minority populations; and
- developing a comprehensive plan at the State and local levels to achieve AIDS prevention objectives and evaluate program effectiveness.

In the 18 months that the HERR cooperative agreements have been funded, participants have made much progress. By the end of fiscal year 1987, 93 percent of the programs had completed assessments of needs and resources for their State or city. Thirty-nine percent of State programs now have data available on the AIDS-related knowledge, attitudes, and behaviors of persons at high risk of HIV infection. Seventy-one percent of the programs have completed surveys of the knowledge, attitudes, and risk behaviors for HIV infection in the general population. As of January 15, 1988, CDC has approved 36 minority community-based organizations for funding. More than 93 percent of the programs have functioning telephone information hotlines, and 54 percent have speakers' bureaus.

**Counseling and testing programs.** Informing and educating persons about whether they themselves are infected with HIV is an important way to prevent HIV transmission. CDC is encouraging widespread counseling and testing for HIV antibody among people whose behavior has increased their risk for HIV infection. In 1985, CDC funded 55 State and local health departments to establish sites for HIV testing and counseling. By June 1987 approximately 1,100 public counseling and testing sites were operating in the United States.

Counseling to assess and reduce risk and testing of serum from all patients is now encouraged in sexually transmitted diseases (STD) clinics, drug treatment facilities, and tuberculosis treatment clinics. All counseling and testing sites should have referral systems for medical and drug treatment, plus psychiatric referral for seropositive people. Seropositive women are routinely counseled about the risk of perinatal transmission and the need to avoid pregnancy. Currently, 45 percent of counseling and testing sites are located in public facilities established for this purpose. Approximately 42 percent are located in STD clinics, 2 percent are located in health clinics for gay men, and 1 to 2

percent are located in hospital outpatient clinics, women's health clinics, or drug treatment facilities. Five percent of counseling and testing sites are located in other facilities. Many of the counseling and testing programs in STD clinics and all of the testing sites in women's health clinics and drug treatment facilities were established in 1987.

In addition to offering HIV counseling and testing to clients in a variety of clinic sites, all programs offer services for notifying partners. Priorities and procedures for notifying partners vary from State to State according to local needs and available resources. For instance, 64 percent of programs offer services to inform exposed sex or needle-sharing partners if the infected person does not wish to inform them personally. Other programs encourage the infected person to notify exposed partners, but they do not offer their involvement. In 1988, CDC will fund a major expansion of the number of counseling and testing sites, especially in STD clinics, drug treatment facilities, and women's health clinics.

**Preventing AIDS in minority populations.** Racial and ethnic minority communities have been disproportionately affected by AIDS in the United States. Nearly 40 percent of the reported cases of AIDS have been diagnosed in blacks and Hispanics. Accordingly, Congress authorized funding of special initiatives for AIDS education and prevention. CDC has made AIDS prevention in minority populations a major priority. Special attention to minority concerns and needs is being given to programs for public information and education, targeted risk reduction, and counseling and testing.

On September 28, 1987, CDC awarded funds to 41 State and local health departments to support health department initiatives to prevent AIDS among minorities. CDC is working actively with these to expedite initiatives with community-based organizations representing or serving minority populations.

Of these funds awarded, 75 percent was allocated for use in 39 States or cities to contract with community-based organizations representing and serving minority populations. As of March 7, 1988, 73 recipients of these funds (43 percent) had already been selected. An additional 52 percent of these funds designated for these minority organizations is currently being awarded by State health departments.

CDC also awarded, on September 27, 1987, funds to the United States Conference of Mayors

(USCM) to work with minority-oriented, community-based organizations to help stimulate AIDS education and prevention at the local level. USCM awards contracts to such organizations for AIDS education among minorities. USCM will also use CDC financial assistance to conduct up to five program-planning workshops for community organizations.

During fiscal year 1988 CDC will provide funds to national minority organizations for AIDS education and prevention activities. The CDC-supported efforts of these organizations will be closely coordinated with those supported through State and local health departments so that resources can be used effectively. In addition to the Federal support for national and community-based minority organizations, many States and cities use Federal and local funds for risk reduction counseling, public information and education, HIV counseling and testing, and street outreach programs that also have major impacts on minority communities.

**AIDS Community Demonstration Projects.** AIDS Community Demonstration Projects are flexible, community-based programs that provide for scientific evaluation of AIDS prevention activities at the community level. CDC has established AIDS community demonstration projects in Dallas, TX; Seattle, WA; Denver, CO; Albany, NY; Chicago, IL; and Long Beach, CA. In addition, a demonstration component has recently been added to the New York City AIDS Prevention Program.

The AIDS Community Demonstration Projects are currently evaluating the effectiveness of prevention activities in changing AIDS-related knowledge, attitudes, beliefs, and behaviors among homosexual men, IV drug users, and prostitutes. At each site, approximately 1,000 persons are being enrolled in cohorts to monitor trends in AIDS-related knowledge, attitudes, beliefs, and behaviors. The broadly directed activities of these projects include using the findings of a population-based survey to develop a surveillance strategy, evaluating partner notification procedures, and evaluating efforts to reach street youth. An example of a more focused activity is evaluating specific health education messages among a group of 450 homosexual men in Albany. Such evaluation allows innovative interventions to be gauged within the context of a community-based program.

**Perinatal AIDS prevention projects.** Pilot demonstration projects for preventing perinatal transmis-

sion of HIV infection have been awarded to the New Jersey State Department of Health, the Nassau County Department of Health (Long Island, NY), and the Houston, TX, Department of Health and Human Services. The purpose of these projects is to develop effective perinatal prevention programs in areas with substantial numbers of HIV infections in women and children.

### **Educating Health Workers**

Health workers in clinical settings must be prepared to address the concerns of infected persons and to counsel or refer for counseling those infected with HIV. Such preparation is part of reducing infected persons' risk of transmitting the virus to others. Health workers represent a major channel for providing accurate AIDS information, helping to assess risk, and counseling to actively reduce risk for the patient, sex partners of the patient, friends and family members of the patient, and allied health care workers—as well as the public. Health care professionals have direct responsibility for patient care and for counseling AIDS patients. In addition, since their direct patient care activities may present some, though quite small, risk of infection, health care workers should follow established infection control procedures with all patients and specimens (to protect themselves from accidental exposure to the blood of infected patients).

A variety of educational approaches must be used to inform and educate health workers. These approaches include workshops, clearinghouses, training centers, and in-service training programs. The health care professionals involved include physicians, nurses, dentists, hygienists, laboratory workers, allied health workers, and others with potential occupational exposure to infective materials.

To inform health workers of AIDS and HIV transmission, CDC has conducted research and provided scientific and technical information, conducted training in the use of HIV laboratory tests, and conducted training for State and local health personnel who are working on AIDS health education risk reduction and on counseling and testing programs. CDC has also developed numerous scientific and technical guidelines and recommendations in consultation with practitioners, public health officials, and others and disseminated these through the *Morbidity and Mortality Weekly Report* (6).

CDC monitors the quality of performance of HIV antibody testing. In 1988, 600 laboratory

workers will be trained to perform HIV laboratory tests. During 1987, a performance evaluation program for HIV antibody testing was begun. More than 800 laboratories have enrolled in the program.

CDC is expanding its capacity to meet the increasing demand for training State and local AIDS prevention project workers. A total of 114 courses is planned for fiscal year 1988.

CDC has provided information about the risk of HIV transmission in the workplace and about methods of prevention. CDC is working with the Occupational Safety and Health Administration, Department of Labor, to inform health care workers and emergency personnel about infection control and AIDS. A joint advisory notice, "Protection Against Occupational Exposure to Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV)," was published in October 1987 (7), and 400,000 copies were mailed to employers.

Although the immediate outlook for AIDS is somewhat bleak, with well over 100,000 cases expected to be diagnosed in the next few years, now is the time to act to control AIDS. This can best be done by providing educational support for behavior changes that decrease the risk of HIV transmission. By controlling HIV transmission now, we contribute to AIDS prevention in the 1990s. The actions we take and how well they serve their purpose may not become apparent for years, but society is depending on its public health educators and community workers to lead the way to a healthier future.

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